

conditions effective to provide a sooty carbon product comprising C₆₀ molecules;

(b) depositing the sooty carbon product on a collecting substrate;

(c) removing the sooty carbon product from the collecting substrate;

F2 (d) contacting the sooty carbon product with a non-polar organic solvent effective to dissolve C₆₀ molecules, said solvent being present in an amount effective to dissolve the C₆₀ molecules in said sooty carbon product; and

(e) recovering from said resulting product formed when the sooty carbon product was contacted with said solvent a solid carbon product comprising C₆₀ in a macroscopic amount.

F2 58. (Amended) The solid carbon product of Claim 53 wherein the carbon source is vaporized in step (a) through heating the carbon source by means of an electrical current of sufficient intensity to produce the sooty carbon product.

F3 86 (Amended) C₆₀ in a macroscopic amount.

F4 96. (Amended) C₇₀ in a macroscopic amount.

102. (Amended) A macroscopic amount of substantially pure C₆₀.

103. (Amended) A macroscopic amount of substantially pure C₇₀.

F5 104. (Amended) A formed or molded product comprising C₇₀, said C₇₀ being present in a macroscopic amount.

105. (Amended) A free flowing particulate comprising C₇₀, said C₇₀ being present in a macroscopic amount.

106. (Amended) A formed or molded product comprising C₆₀, said C₆₀ being present in a macroscopic amount.

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107. (Amended) A free flowing particulate comprising C₆₀, said C₆₀ being present in a macroscopic amount.

109. (Amended) The solid carbon product of Claim 53 wherein the recovered C₆₀ in said solid carbon products is in an amount that is capable of being detected by IR.

110. (Amended) The solid carbon product of Claim 53 wherein the recovered C₆₀ in said solid carbon products is in an amount that is capable of being detected by UV.

111. (Amended) A solid comprising C₆₀, said C₆₀ being present in a macroscopic amount.

112. (Amended) A solid comprising C₇₀, said C₇₀ being present in a macroscopic amount.

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113. (Amended) A sooty product comprising C₆₀, the C₆₀ in said sooty product being present in sufficient concentration to allow a macroscopic amount of said C₆₀ to be separated therefrom.

114. (Amended) A sooty product comprising C₇₀, the C₇₀ in said sooty product being present in sufficient concentration to allow a macroscopic amount of said C₇₀ to be separated therefrom.

115. (Amended) The sooty product of Claim 113, in which the C₆₀ is present in an amount that is capable of being detected by IR.

116. (Amended) The sooty product of Claim 114 in which the C₇₀ is present in an amount that is capable of being detected by IR.

117. (Amended) The sooty product of Claim 113 in which the C₆₀ is present in an amount that is capable of being detected by UV.

118. (Amended) The sooty product of Claim 114 in which the C_{70} is present in an amount that is capable of being detected by UV.

119. (Amended) A sooty carbon product prepared by the process comprising:

(a) vaporizing a carbon source in the presence of an inert gas to provide a vapor of carbon atoms,

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(b) quenching said vapor of carbon in said inert gas under conditions effective to nucleate and condense said vapor of carbon atoms into a sooty carbon product comprising C_{60} molecules, said C_{60} molecules being present in said sooty carbon in sufficient concentrations to allow a macroscopic amount of C_{60} to be separated from said soot.

120. (Amended) The sooty carbon product of Claim 119 in which the C_{60} is present in an amount that is capable of being detected by IR.

121. (Amended) The sooty carbon product of Claim 119 in which the C_{60} is present in an amount that is capable of being detected by UV.

133. (Amended) The C_{60} of Claim 86 in which the C_{60} is present in an amount sufficient to take a micrograph.

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134. (Amended) The solid C_{60} of Claim 111 in which the C_{60} is present in an amount sufficient to take a micrograph.

135. (Amended) The C_{60} of Claim 102 in which the C_{60} is present in an amount capable of being detected by IR.

136. (Amended) The C_{60} of Claim 102 in which the C_{60} is present in an amount capable of being detected by UV.

137. (Amended) The C₆₀ of Claim 102 in which the C₆₀ is present in an amount sufficient to obtain an X-ray diffraction pattern thereof.

138. (Amended) The C₆₀ of Claim 102 in which the C₆₀ is present in an amount sufficient to take a micrograph.

139. (Amended) The C₇₀ of Claim 103 in which the C₇₀ is present in an amount capable of being detected by UV.

140. (Amended) The C₇₀ of Claim 103 in which the C₇₀ is present in an amount capable of being detected by IR.

156. (Amended) The solid carbon product of Claim 155 wherein C₇₀ is separated from C₆₀ by sublimation, column chromatography, fractional crystallization, capillary electrophoresis, HPLC, preparative thin layer chromatography, or extraction.

158. (Amended) The solid carbon product of Claim 141 wherein the C₆₀ is present in an amount capable of being detected by IR.

159. (Amended) The solid carbon product of Claim 141 wherein the C₆₀ is present in an amount capable of being detected by UV.

160. (Amended) The solid carbon product of Claim 141 wherein the C₆₀ is present in an amount sufficient to obtain an X-ray diffraction pattern thereof.

161. (Amended) The solid carbon product according to Claim 141 in which the C₆₀ is present in an amount sufficient to take a micrograph.

162. (Amended) The solid carbon product according to Claim 155 wherein the C₇₀ is present in a macroscopic amount.

163. (Amended) The solid carbon product according to Claim 162 wherein the C₇₀ is present in an amount that is capable of being detected by UV.

164. (Amended) The solid carbon product according to Claim 162 wherein the C₇₀ is present in an amount that is capable of being detected by IR.

165. (Amended) A solid comprising a macroscopic amount of crystalline C₆₀.

166. (Amended) A solid comprising a macroscopic amount of crystalline C₇₀.

167. (Amended) A carbon product comprising a macroscopic amount of solid C₆₀.

168. (Amended) A carbon product comprising a macroscopic amount of solid C₇₀.

171. (Amended) The solid according to Claim 111 wherein C₆₀ is present in an amount that is capable of being detected by IR.

172. (Amended) The solid according to Claim 111 wherein the C₆₀ is present in an amount that is capable of being detected by UV.

173. (Amended) The solid according to Claim 111 wherein the C₆₀ is present in an amount sufficient to obtain X-ray diffraction pattern thereof.

174. (Amended) The solid according to Claim 111 wherein the C₇₀ is present in an amount that is capable of being detected by UV.

175. (Amended) The solid according to Claim 112, wherein the C₇₀ is present in an amount that is capable of being detected by IR.

176. (Amended) The carbon product of Claim 167 or 169 wherein the C₆₀ is present in an amount that is capable of being detected by IR.